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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/910,862	07/24/2001	Tomoaki Kawada	HITA.0090	4055

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EXAMINER

LESPERANCE, JEAN E

ART UNIT	PAPER NUMBER
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2674

DATE MAILED: 04/13/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/910,862

Applicant(s)

KAWADA ET AL.

Examiner

Jean E Lesperance

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 January 2004.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claims 1-23 are presented for examination.

The allowable subject matter of claims 3-6, 8, 10-14, and 17-23 is withdrawn with a newly found prior art.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-23 are rejected under U.S.C. 103 (a) as being unpatentable over U.S. Patent number 6,147,725 ("Yuuki et al.") in view of Japanese Patent # 09-258030 (Kayoko et al.).

As for claim 1, Yuuki et al. teach the liquid crystal panel module 5 is arranged at the side of an inner face of a metallic case 6 of the liquid crystal display device 4 (Fig.1) and it is inherent in an LCD to include a pair of substrates between which a liquid crystal layer is interposed corresponding to a liquid crystal panel having a pair of substrates between which a liquid crystal layer is interposed; the liquid crystal panel module 5 is comprised of a backlight unit 10 disposed at the rear surface of the liquid crystal panel (Fig.2) corresponding to a backlight being disposed at a rear surface side of the liquid

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crystal panel; and equilateral prisms are located between the light guide plate and reflecting sheet of the backlight unit in a direction parallel to a polarization axis of the polarizing plate of the liquid crystal panel unit (abstract, lines 7-10) corresponding to a diffusing sheet and a prism sheet lying between the rear surface of the liquid crystal panel and the backlight, wherein the light guide plate has a rectangular shaped Fig.2 (11) corresponding to the backlight has a substantially rectangular-shaped light guide plate being formed of a transparent plate and the fluorescent lamp is disposed along a incidence plane provided at one side of the light guide plate corresponding to a linear lamp being disposed along a incidence plane provided at one side of the light guide plate; a plurality of grooves and located opposite the front surface, and a side surface transverse to the front and rear surfaces (column 9, lines 57-59) and as can be seen in Figure 6, where the lamp 13 occupied the entire rear surfaces which means also that the light emission or the lamp 31 is placed at the corner of the light guide plate and creates a plurality of grooves which the examiner is interpreted as corresponding to a light emission pattern having a plurality of grooves slanted to the one side of the light guide plate. Accordingly, the prior art teaches all the claimed limitations as recited in claim 1 with the exception of providing a light guide plate on a back surface except for a center portion of the light guide plate.

However, Kayoko et al. teach to correct the luminance level of the incident side end of a light guide plate and to lessen unequal brightness by forming regions for irregular reflecting illuminate light on the flanks and end face sides of a planar member

(abstract) corresponding to a light guide plate on a back surface except for a center portion of the light guide plate. See Figures 1 and 2.

It would have been obvious to a person of ordinary skill in the art to utilize the correction as taught by Kayoko et al. in the liquid crystal panel disclosed by Yuuki et al. because this would allow light to be even on the entire planar member.

As for claim 7, Yuuki et al. teach the liquid crystal panel module 5 is arranged at the side of an inner face of a metallic case 6 of the liquid crystal display device 4 (Fig.1) and it is inherent in an LCD to include a pair of substrates between which a liquid crystal layer is interposed corresponding to a liquid crystal panel having a pair of substrates between which a liquid crystal layer is interposed; the liquid crystal panel module 5 is comprised of a backlight unit 10 disposed at the rear surface of the liquid crystal panel (Fig.2) corresponding to a backlight being disposed at a rear surface side of the liquid crystal panel; and equilateral prisms are located between the light guide plate and reflecting sheet of the backlight unit in a direction parallel to a polarization axis of the polarizing plate of the liquid crystal panel unit (abstract, lines 7-10) corresponding to a diffusing sheet and a prism sheet lying between the rear surface of the liquid crystal panel and the backlight, wherein the light guide plate has a rectangular shaped Fig.2 (11) corresponding to the backlight has a substantially rectangular-shaped light guide plate being formed of a transparent plate and the fluorescent lamp is disposed along a incidence plane provided at one side of the light guide plate corresponding to a linear lamp being disposed along a incidence plane provided at one side of the light guide plate; a plurality of grooves and located opposite the front surface, and a side surface

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transverse to the front and rear surfaces (column 9, lines 57-59) and as can be seen in Figure 6, where the lamp 13 occupied the entire rear surfaces which means also that the light emission of the lamp 31 is placed at the corner of the light guide plate and creates a plurality of grooves which the examiner is interpreted as corresponding to a light emission pattern having a plurality of grooves slanted to the one side of the light guide plate and fine dots.

As for claim 15, Yuuki et al. teach the liquid crystal panel module 5 is arranged at the side of an inner face of a metallic case 6 of the liquid crystal display device 4 (Fig.1) and it is inherent in an LCD to include a pair of substrates between which a liquid crystal layer is interposed corresponding to a liquid crystal panel having a pair of substrates between which a liquid crystal layer is interposed; the liquid crystal panel module 5 is comprised of a backlight unit 10 disposed at the rear surface of the liquid crystal panel (Fig.2) corresponding to a backlight being disposed at a rear surface side of the liquid crystal panel; and equilateral prisms are located between the light guide plate and reflecting sheet of the backlight unit in a direction parallel to a polarization axis of the polarizing plate of the liquid crystal panel unit (abstract, lines 7-10) corresponding to a diffusing sheet and a prism sheet lying between the rear surface of the liquid crystal panel and the backlight, wherein the light guide plate has a rectangular shaped Fig.2 (11) corresponding to the backlight has a substantially rectangular-shaped light guide plate being formed of a transparent plate and the fluorescent lamp is disposed along a incidence plane provided at one side of the light guide plate corresponding to a linear lamp being disposed along a incidence plane provided at one side of the light guide

plate; a plurality of grooves and located opposite the front surface, and a side surface transverse to the front and rear surfaces (column 9, lines 57-59) and as can be seen in Figure 6, where the lamp 13 occupied the entire rear surfaces which means also that the light emission or the lamp 31 is placed at the corner of the light guide plate and creates a plurality of grooves which the examiner is interpreted as corresponding to a light emission pattern having a plurality of grooves slanted to the one side of the light guide plate.

As for claim 16, Yuuki et al. teach a plurality of grooves and located opposite the front surface, and a side surface transverse to the front and rear surfaces (column 9, lines 57-59) and as can be seen in Figure 6, where the lamp 13 occupied the entire rear surfaces which means also that it is formed at both corner area of the main surface 31 of the light guide plate and creates a plurality of grooves which the examiner is interpreted as corresponding to a plurality of grooves are formed at both corner areas on the one of the pair of main surfaces of the light guide plate along the one of the side thereof.

As for claims 2 and 9, Kayoko et al. teach Figure 14 with a plurality of grooves at the corners of the planar member (2) corresponding to the plurality of the grooves are overlapping with the display area of the liquid crystal panel.

As for claims 3-6, 8, 10-14, and 17-23, Kayoko et al. teach Figure 14 with a plurality of grooves at the corners of the planar member (2) where the light create a plurality of grooves. In this figure the light emission pattern are higher at an end side of the corner portion on the surface of the light guide plate is inherent. The grooves are

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formed radially out from the end side of the corner portion is inherent also in figure 14. The grooves are parallel to each other is inherent (See Figure 14). The arrangement density of the grooves is controlled by altering respective arrangement intervals or individual depths of the grooves is inherent (See figure 14). At least part of the area at which the fine dots are formed are overlapped with one another on the main surface of the light guide plate is also inherent in figure 14 of the prior art (See figure 14). The first and second grooves are overlapped with the display area of the liquid crystal panel, and not formed on a center portion of the light guide plate is inherent also in figure 14 of the prior art.

Response to Amendment

Applicant's arguments filed 1-7-2004 have been fully considered but they are not persuasive. The applicant argued that the prior art does not teach a light guide plate on a back surface except for a center portion of the light guide plate. The examiner agrees with the applicant that Yuuki '725 does not teach the above statement but a new prior art, Kayoko et al., was found to teach "to correct the luminance level of the incident side end of a light guide plate and to lessen unequal brightness by forming regions for irregular reflecting illuminate light on the flanks and end face sides of a planar member (abstract) corresponding to a light guide plate on a back surface except for a center portion of the light guide plate". See Figures 1 and 2. Therefore, the rejection is maintained.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jean Lesperance whose telephone number is (703) 308-6413. The examiner can normally be reached on from Monday to Friday between 8:00AM and 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe, can be reached on (703) 305-4709 .

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

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or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Jean Lesperance



Date 4-5-2004

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RICHARD HJERPE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600